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# TAYLOR M. OKONEK

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Department of Mathematics, Statistics, & Computer Science, Macalester College,  
1600 Grand Avenue, Saint Paul, MN 55105

## EDUCATION

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### University of Washington, Seattle, WA

*September 2018 - August 2023*

Ph.D., Biostatistics

Advisor: Jon Wakefield, Ph.D.

Dissertation: Statistical Methods for Official Statistics and Mortality Estimation

### Saint Olaf College, Northfield, MN

*September 2014 - May 2018*

B.A., Mathematics and Religion

Concentration in Statistics

*Summa cum laude*

## WORK EXPERIENCE

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### Assistant Professor

*August 2023 - Present*

Macalester College, Department of Mathematics, Statistics, & Computer Science

### Research Assistant

University of Washington, Department of Biostatistics

Supervisor: Jon Wakefield, Ph.D.

*June 2019 - August 2023*

University of Washington, Department of Environmental and Occupational Health Sciences

Supervisors: Lianne Sheppard, Ph.D. and Joel Kaufman, Ph.D.

*September 2018 - June 2019*

### Saint Olaf College Center for Interdisciplinary Research

Statistical Consultant

Supervisors: Louis Epstein, Ph.D. and Sharon Lane-Getaz, Ph.D.

*September 2016 - May 2018*

Matthew Wright, Ph.D. and Matthew Richey, Ph.D.

### Saint Olaf College Collaborative Undergraduate Research and Inquiry Program

Student Summer Researcher

Supervisors: Sharon Lane-Getaz, Ph.D.

*May 2016 - August 2016*

## TEACHING EXPERIENCE

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### Instructor

Macalester College, Department of Mathematics, Statistics, & Computer Science

- STAT 155: Introduction to Statistical Modeling (2 sections)

*2023*

University of Washington, Department of Biostatistics

- BIOS T 311: Regression Methods in the Health Sciences

*March 2022 - June 2022*

*Co-taught with Charlie Wolock*

## Teaching Assistant

University of Washington, Department of Biostatistics

- BIOST 310: Biostatistics for the Health Sciences *September 2020 - December 2020*
- Summer Institute in Statistics and Modeling in Infectious Diseases *July 2021, July 2022*  
*Spatial Statistics in Epidemiology and Public Health*
- Course preparation: Maintenance of R package **rigr** *June 2021 - September 2021*
- BIOST 555: Statistical Methods for Spatial Epidemiology *January 2022 - March 2022*
- BIOST 537: Survival Data Analysis in Epidemiology *January 2023 - March 2023*

Saint Olaf College, Department of Mathematics and Statistics

*February 2015 - May 2018*

- STAT 212: Statistics for the Sciences
- STAT 322: Statistical Theory
- MATH 244: Real Analysis
- MATH 262: Probability Theory

## Undergraduate Student Mentor

University of Washington, Department of Statistics

*January 2021 - June 2021*

- Directed Reading Program Mentor: Topics in Biostatistics
- Directed Reading Program Mentor: Disease Mapping

Fred Hutchinson Cancer Research Center

*June 2021 - September 2021*

- Summer Internship Mentor

## INDUSTRY EXPERIENCE

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### Data Science Intern

WindLogics, St. Paul, MN

*May 2017 - August 2017*

## AWARDS AND HONORS

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### University of Washington

ARCS Foundation Fellow

Biostatistics, Epidemiologic, and Bioinformatic Training in Environmental Health Training Grant

Department of Biostatistics Exceptional Service Award

### Saint Olaf College

Phi Beta Kappa Honors Society

Blue Key Honor Society

Pi Mu Epsilon Honor Society

Theta Alpha Kappa Honor Society

Bellows Scholarship

President's Scholarship

## PROFESSIONAL SERVICE

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### Manuscript Reviewer

Journal of Official Statistics

Journal of Survey Statistics and Methodology

## UNIVERSITY SERVICE

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### University of Washington, Department of Biostatistics

Member - Biostatistics Equity, Diversity, and Inclusion Committee *September 2018 - September 2021*

Member - Statistics Education Reading Group *September 2019 - Present*

Member - Biostatistics Activities and Events Squad *September 2019 - September 2022*

Member - Admissions Committee *September 2021 - April 2022*

Member - Teaching Faculty Search Committee *September 2021 - March 2022*

### Saint Olaf College

Member - TRIO McNair Scholars Program *January 2016 - May 2018*

## PUBLICATIONS

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### PUBLISHED

5. Chen, Y.T., . . . , **Okonek, T.M.**, . . . , Willis, A.D. (2022). rigr: Regression, Inference, and General Data Analysis Tools in R. *The Journal of Open Source Software*, 80, 7.
4. Eaton, J., . . . , **Okonek, T.M.**, . . . , Shiraishi, R.W. (2021). Naomi: A New Modelling Tool for Estimating HIV Epidemic Indicators at the District Level in Sub-Saharan Africa. *Journal of the International AIDS Society*, 24.
3. Wakefield, J., **Okonek, T.M.**, Pedersen, J. (2020). Small Area Estimation for Disease Prevalence Mapping. *International Statistical Review*, 88, 2.
2. Han, S.M., **Okonek, T.M.**, Yadav, N., Zheng, X. (2020). Distributions of Matching Distances in Topological Data Analysis. *SIAM Undergraduate Research Online*, 13.
1. Epstein, L.K., **Okonek, T.M.**, Perkins, A.E. (2019). Mind the Gap: Inclusive Pedagogies for Diverse Classrooms. *Journal of Music History Pedagogy*, 9, 2.

### SUBMITTED

1. **Okonek, T.M.**, Wakefield, J. (2022). A Computationally Efficient Approach to Fully Bayesian Benchmarking.

## SOFTWARE

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psst	Parametric Survey-weighted Survival models for Synthetic children across Time
rigr	Regression, inference, and general data analysis tools for R
stbench	Fully Bayesian Benchmarking for spatio-temporal models
SUMMER	SAE Unit/area Models and Methods for Estimation in R

## RESEARCH PRESENTATIONS

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1. "A Computationally Efficient Approach to Fully Bayesian Benchmarking." WNAR, Virtual. June, 2022. { *Contributed Presentation* }
2. "A Computationally Efficient Approach to Fully Bayesian Benchmarking." Biostatistics Student Seminar Series, UW Department of Biostatistics, Seattle, WA. November, 2021. { *Contributed Presentation* }

3. “Assessing National PM10 Predictions: From 1990 to 2016.” BEBTEH Student Research Day, UW, Seattle, WA. April, 2019. { *Poster Session* }
4. “Distributions of Matching Distances in Topological Data Analysis.” Underrepresented Students in Topology and Algebra Research Symposium, Portland, OR. April, 2018. { *Poster Session* }
5. “The Music History Game: Assessing Learning through Play.” National Conferences on Undergraduate Research, Memphis, TN. April, 2017. { *Poster Session* }
6. “Teacher Professional Learning Communities and Student Achievement.” Saint Olaf College Collaborative Undergraduate Research and Inquiry Program, Northfield, MN. August, 2016. { *Poster Session* }

## PROFESSIONAL AFFILIATIONS

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American Statistical Association

## TECHNICAL SKILLS

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### Programming Languages and Statistical Packages

R, c++, Python, Mathematica,  
Shiny, Tidyverse

### Other Applications

L<sup>A</sup>T<sub>E</sub>X, Linux/Unix, Git